

## CLAIMS

*What is claimed is:*

1. A method for providing information for selecting a content server to a network node associated with a client, the method comprising:
  - 5 receiving a request for a response, wherein the request corresponds to a message transmitted by a network node associated with a client for selecting a content server;
  - 10 providing a response datagram, the response datagram associated with the received request;
  - 15 providing a padded response datagram, wherein the padded response datagram is obtained by padding the response datagram with an arrangement of bits; and transmitting the padded response datagram to the network node associated with the client for selecting a content server wherein reception of the padded response datagram by the network node provides information for selecting a content server.
2. The method of claim 1, wherein the request is a Boomerang Control Protocol message.
3. The method of claim 1, wherein the response is a DNS reply.
4. The method of claim 1, wherein the bits are randomly generated.
- 20 5. The method of claim 1, wherein the network node associated with the client for selecting a content server is a local domain name server.
6. A method for providing information associated with a network for selecting a content server, the method comprising:
  - receiving a request from the server selection system for a response message;

providing a response datagram, the response datagram corresponding to the response message, wherein the response datagram is associated with a network layer length, a transport layer length, and a network layer header length.

providing an altered response datagram, wherein the network layer length is

5 greater than the sum of the transport layer length and the network layer header length.

transmitting the altered response datagram to the node responsible for selecting a content server, wherein receipt of the altered response datagram provides information on network characteristics to the server selection system.

7. The method of claim 6, wherein the request is a Boomerang Control

10 Protocol message.

8. The method of claim 7, wherein the response is a DNS Reply.

9. The method of claim 6, wherein the altered response datagram response fragments is padded with data.

10. The method of claim 9, wherein the data is randomly generated.

15 11. A computer program product comprising a machine readable medium on which is provided program instructions for providing network information to a network node associated with a client, the computer program product comprising:

computer code for receiving a request for a response, wherein the request corresponds to a message transmitted by the network node associated with a client for  
20 selecting a content server;

computer code for providing a response datagram, the response datagram associated with the received request;

computer code for providing a padded response datagram, wherein the padded response datagram is obtained by padding the response datagram with an arrangement  
25 of bits; and

computer code for transmitting the padded response datagram to the network node associated with the client for selecting a content server wherein reception of the padded response datagram by the network node provides information for selecting a content server.

5        12.      The computer program product of claim 11, wherein the request is a Boomerang Control Protocol message.

13.      The computer program product of claim 12, wherein the response is a DNS reply.

10        14.      The computer program product of claim 13, wherein reception of all of the fragments by the network node provides bandwidth availability information to the network node associated with the client.

15        15.      The computer program product of claim 11, wherein the network layer length of the response datagram is increased while the transport layer length field is unmodified.

15        16.      The computer program product of claim 11, wherein the arrangement of bits is randomly generated.

17.      An apparatus for providing network information for selecting a content server to a network node associated with a client, the apparatus comprising:

memory;

20        an input interface for receiving a request for a response, wherein the request corresponds to a message transmitted by the network node associated with a client for selecting a content server;

one or more processors coupled with the memory, the processors configured to provide a response datagram, the response datagram corresponding to the received request wherein the processors are configured to provide a padded response datagram,

the padded response datagram obtained by padding the response datagram with an arrangement of bits;

an output interface for transmitting the padded response datagram to the network node associated with the client wherein reception of the padded response  
5 datagram by the network node provides information for selecting a content server.

18. The apparatus of claim 17, wherein the network node associated with the client is a local domain name server.

19. The apparatus of claim 17, wherein the network node associated with the client is a server selection system.

10 20. The apparatus of claim 17, wherein the request is a Boomerang Control Protocol message.

21. The apparatus of claim 17, wherein the response is a DNS Reply.

22. The apparatus of claim 17, wherein the padded response datagram can be trimmed to form a DNS Reply.

15 23. The apparatus of claim 17, wherein the response datagram corresponds to a network layer length field and a transport layer length field.

24. The apparatus of claim 23, wherein the network layer length field is increased while the transport layer length field is unmodified.

25. The apparatus of claim 17, wherein the arrangement of bits is

20 randomly generated.

26. A apparatus for providing information for selecting a content server to a network node associated with a client, the apparatus comprising:

means for receiving a request for a response, wherein the request corresponds to a message transmitted by a network node associated with a client for selecting a  
25 content server;

means for providing a response datagram, the response datagram associated with the received request;

means for providing a padded response datagram, wherein the padded response datagram is obtained by padding the response datagram with an arrangement  
5 of bits; and

means for transmitting the padded response datagram to the network node associated with the client for selecting a content server wherein reception of the padded response datagram by the network node provides information for selecting a content server.

10 27. The apparatus of claim 26, wherein the response datagram corresponds to a network layer length field and a transport layer length field.

28. The apparatus of claim 27, wherein the network layer length field is increased while the transport layer length field is unmodified.

15 29. The apparatus of claim 26, wherein the arrangement of bits is randomly generated.